

### **REMARKS**

The Office Action dated August 24, 2005 has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response to the Office Action.

Claims 4 and 22 are amended to correct informalities. Claims 1, 2, 6, 10, 15, and 19 are amended to particularly point out and distinctly claim the subject matter of the invention. Support for the amendments is found at least in paragraphs 0026 – 0028, 0041, and 0107. New claims 23 and 24 are added. No new matter is added. Claims 1-24 are respectfully submitted for consideration.

The Office Action objected to claims 4 and 22 because of informalities. Applicants respectfully submit that these claims are amended as required in the Office Action. Accordingly, withdrawal of the objection to claims 4 and 22 is respectfully requested.

The Office Action rejected claims 1, 4, and 5-18 under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,128,328 to Schilling (Schilling). Applicants respectfully submit that the cited reference fails to disclose or suggest all of the features of any of the pending claims.

Claim 1, from which claims 2-9 and 23 depend, recites a cellular communication system including at least one cell. The cell being defined by a coverage layer having a fixed coverage area. The cell is further defined by a capacity layer comprising a plurality of carriers, each carrier in the capacity layer having a variable coverage area.

Claim 10, from which claims 11-18 and 24 depend, recites a method of configuring a cellular communication system. The method includes determining a coverage layer for a cell, the coverage layer having a fixed coverage area. The method further includes determining a capacity layer for the cell, the capacity layer including a plurality of carriers, each carrier in the capacity layer having a variable coverage area.

According to certain embodiments the present invention dynamically adjusts the coverage and capacity of a radio cell provided that the network elements have the required properties. The invention utilizes a multicarrier system or a single carrier system where performance of the carriers is enhanced in a controlled manner. The invention thus provides a tool for planning and controlling a radio network in different types of coverage and capacity scenarios, realizing that the system does not have to provide all capacity all the time over the whole cell area. In the invention it is assumed that the users are, in general, uniformly distributed over the cell coverage area. The host cell can serve more users near the BTS site, and a service of several cells is available at the cell edge providing adequate capacity over the whole service area. Applicants respectfully submit that the cited reference fails to disclose or suggest all of the features of any of the pending claims.

Schilling is directed to frequency hopping code division multiple access system and method. Schilling discloses the idea of separating a cell into a series of concentric regions such that an appropriate frequency and power can be used to communicate with a

mobile station depending on its location within the cell. See column 8 lines 36 – 66 and Fig. 5 of Schilling.

Applicants respectfully submit that Schilling fails to disclose or suggest at least the feature of a cell with a fixed coverage area and a plurality of separate carriers with variable coverage area, as recited in claim 1 and similarly recited in claim 10.

Applicants respectfully submit that because claims 2-9, 23, 11-18 and 24 depend from claims 1 and 10 respectively, these claims are allowable at least for the same reasons discussed above. Further, Applicants submit that Schilling fails to disclose or suggest all of the features of these dependent claims.

Based at least on the above, Applicants respectfully submit that the cited reference fails to disclose or suggest all of the features of claims 1, 4, 5-18. Accordingly, withdrawal of the rejection of claims 1, 4 and 5-18 under 35 U.S.C. 102(b) is respectfully requested.

The Office Action rejected claims 2, 3, and 19-21 under 35 U.S.C. 103(a) as being obvious over Schilling, in view of admitted prior art (APA). The Office Action took the position that Schilling inherently disclosed the feature of a power level of a carrier in a downlink of the coverage layer that defines the coverage of the cell. As support the Office Action cites that the APA discloses that in GSM systems, the cell coverage is determined by the carrier for the broadcast control channel. Applicants respectfully submit that the cited prior art taken individually or in combination, fail to disclose or suggest all of the features recited in any of the above claims.

Regarding claims 2 and 3, Applicants respectfully submit that Schilling is deficient at least for the reasons stated above and APA fails to cure these deficiencies. Specifically the APA fails to disclose or suggest at least the feature of a cell with a fixed coverage area and a plurality of separate carriers with variable coverage area.

Claim 19, from which claims 20-22 depend, recites a base station of a mobile communication system including means for transmitting a carrier at a predetermined power level thereby defining a coverage area of a cell, and means for transmitting a variable number of carriers thereby defining, at least in part, a capacity of the cell.

Applicants respectfully submit that the cited prior art fails to disclose or suggest at least the feature of transmitting a carrier at a predetermined power level thereby defining a coverage area of a cell, as recited in claim 19. The Office Action alleged that Schilling disclosed that there is an inherent power level that a conventional broadcast channel can reach a mobile at the boundary of a cell thereby defining the boundary of the coverage area.

Claim 19 clearly recites at least in part that the power level is “predetermined.” The Office Action fails to address where Schilling discloses that this allegedly inherent, predetermined power level is disclosed in Schilling.

Further, the Office Action states regarding the rejection of claim 19 that Schilling asserts that there is an inherent power level that a conventional broadcast channel can reach a mobile at the boundary of a cell thereby defining the boundary of the coverage area, without providing a factual basis or technical reasoning for the alleged inherency.

Thus, the Office Action has not met its burden of establishing an inherent feature in the cited reference that reads upon the features recited in the pending claims.

Applicants further submit that there is no motivation to combine Schilling with APA because Schilling is directed to overcoming problems typically associated with CDMA systems, such as interference due to signals in the same frequency band, one skilled in the art would not be motivated to look to Schilling to solve the problems associated with TDMA systems.

To establish *prima facie* obviousness, there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one skilled in the art to modify the references or to combine reference teachings. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicants submit that problems relating to fixed and pre-defined cell coverage and capacity especially with respect to base station architecture and hardware, are not contemplated in Schilling. Thus, Applicants respectfully submit that there is no motivation to combine Schilling with APA.

Applicants respectfully submit that because claims 20-22 depend from claim 19, these claims are allowable at least for the same reasons as claim 19. Further, Applicants submit that the cited prior art fails to disclose or suggest all of the features recited in these dependent claims.

Based at least on the above, Applicants respectfully submit that the cited prior art fails to disclose or suggest all of the features of claims 2, 3, and 19-22. Accordingly,

withdrawal of the rejection of claims 2, 3, and 19-22 under 35 U.S.C. 103(a) is respectfully requested.


Applicants respectfully submit that new, dependent claims 23 and 24 recite features that are neither disclosed nor suggested in any of the cited references.

Applicants respectfully submit that each of claims 1-24 recite features that are neither disclosed nor suggested in any of the cited references. Accordingly, Applicants respectfully request that each of claims 1-24 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

  
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Enclosures: Petition for Extension of Time  
Additional Claim Fee Transmittal  
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